

Amendments To The Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. – 26. Canceled.

27. (New) A method for selecting orthodontic components for use in an orthodontic treatment of an individual, the method comprising:

(i) in a computer:

(a) selecting a virtual set of orthodontic components representing components that may be used in an orthodontic treatment,

(b) providing a first virtual three-dimensional (3D) image of a 3D model of the individual's teeth comprising teeth of at least one jaw, the model being manipulable so as to allow its viewing from a desired direction,

(c) associating the virtual set of components with the teeth in said virtual image in a manner resembling that in which such components are associated with teeth in an orthodontic treatment, to obtain a second image of said 3D model with said components associated therewith, and

(d) using a set of rules, including at least one rule, defining the effect of said set of components on said teeth, computing the manner of movement of the teeth as a result of said effect, so as to obtain a third image comprising the teeth model following the virtual treatment; and

(ii) selecting a set of orthodontic components for use in an orthodontic treatment resembling and having same properties as said virtual set.

28. (New) A method according to Claim 27, wherein step (i) is repeated a plurality of times, each time changing the manner in which at least one of steps (a), (c) or (d) is applied, until said third image shows a desired result of an orthodontic treatment and in step (ii) selecting a set of components resembling and having same properties as the virtual set that yielded said desired result.

29. (New) A method according to Claim 27, wherein the set of orthodontic components comprises brackets, one for each tooth and one archwire for each jaw.

30. (New) A method according to Claim 27, wherein steps (c) and (d) are repeated a plurality of times.

31. (New) A method according to Claim 30, wherein in at least one of said repetitions of steps (c) and (d), a position and/or orientation of at least one said orthodontic components with respect to the tooth it is associated with is changed with respect to a position and/or orientation, respectively, previously held.

32. (New) A method according to Claim 30, wherein in at least one of said repetitions of steps (b) and (c), the type of orthodontic component associated with at least one tooth is changed with respect to the orthodontic component previously associated with said tooth.

33. (New) A method according to Claim 32, wherein in at least one of said repetitions of steps (b) and (c), a position and/or orientation of at least one said orthodontic components with respect to the tooth it is associated with is changed with respect to a position and/or orientation, respectively, previously held.

34. (New) A method according to Claim 27, comprising providing a user interface and wherein said selecting comprises using the user interface for selecting the virtual set of orthodontic components.

35. (New) A method according to Claim 27, wherein said associating comprises manually associating the selected brackets with the teeth of said first image.

36. (New) A method according to Claim 27, wherein said predicting is used to design an orthodontic treatment.

37. (New) A method according to Claim 27, for predicting an outcome of an orthodontic treatment.

38. (New) A method according to Claim 27, wherein said first image is a virtual representation of a three-dimensional (3D) model of the individual's teeth at interim treatment stage and said third image is a virtual representation of an interim or a final treatment stage.

39. (New) A method according to Claim 27, wherein said set of rules is extracted from a dynamic learning database holding an adjustable rule base.
40. (New) A method according to Claim 39, wherein the adjustment of the database is based on characteristics of the individual undergoing the orthodontic treatment.
41. (New) A method according to Claim 27, comprising virtually extracting one or more teeth from the teeth model of said first image.
42. (New) A method according to Claim 41, wherein said set of rules include a rule that defines movement of teeth to occupy space previously occupied by an extracted tooth.
43. (New) A method according to Claim 41, wherein the virtually extracting is performed manually by a user.
44. (New) A method according to Claim 41, wherein the virtually extracting is performed automatically in case of teeth crowding.
45. (New) A method according to Claim 27, comprising virtually adding a tooth to the model of said first image.
46. (New) A method according to Claim 45, wherein the added tooth represents one that has not yet grown.

47. (New) A method according to Claim 45, wherein the added tooth represents a crown that may be added or implanted in a real-life treatment.

48. (New) A method according to claim 27, further comprising the step of outputting the manner of association of each orthodontic component in step (ii) with each corresponding tooth in said first image.

49. (New) A method according to claim 28, further comprising the step of outputting the manner of association of each orthodontic component in step (ii) with each corresponding tooth in said first image.

50. (New) A method for selecting real-life orthodontic components for use in an orthodontic treatment of an individual, the method comprising:

(i) in a computer:

(a) selecting a virtual set of orthodontic components representing real-life orthodontic components that may be used in an orthodontic treatment, said virtual set of components resembling and having same properties as said real-life set,

(b) providing a first virtual three-dimensional (3D) image of a 3D model of the individual's teeth comprising teeth of at least one jaw, the model being manipulable so as to allow its viewing from a desired direction,

(c) associating the virtual set of components with the teeth in said virtual image in a manner resembling that in which such components are associated with teeth in an

orthodontic treatment, to obtain a second image of said 3D model with said components associated therewith, and

(d) using a set of rules, including at least one rule, defining the effect of said set of components on said teeth, computing the manner of movement of the teeth as a result of said effect, so as to obtain a third image comprising the teeth model following the virtual treatment; and

(ii) repeating step (i) a plurality of times until said substep (d) provides a desired result of the virtual treatment, wherein each time step (i) is repeated at least one of the following is changed:-

(A) in step (a) at least one said orthodontic components is changed for a different orthodontic component;

(B) in step (b) said association of at least one said orthodontic component with respect to a tooth in said virtual image is changed with respect to the preceding association.

51. (New) Method according to claim 50, wherein in step (A) said different orthodontic component comprises an orthodontic component previously used on a different tooth.

52. (New) Method according to claim 50, wherein in step (A) said different orthodontic component comprises a new orthodontic component not previously comprised in said set of orthodontic components.

53. (New) Method according to claim 50, wherein in step (B) said change in association

comprises a change in at least one of a position and orientation of the orthodontic component with respect to the tooth.

54. (New) A method according to claim 50, further comprising the step of outputting the manner of association of each orthodontic component at the end of step (ii) with each corresponding tooth in said first image.